

UMO 1528 (98UMR016)
PATENT

On page 4, line 31, replace "copolymer" with --
copolymer --.

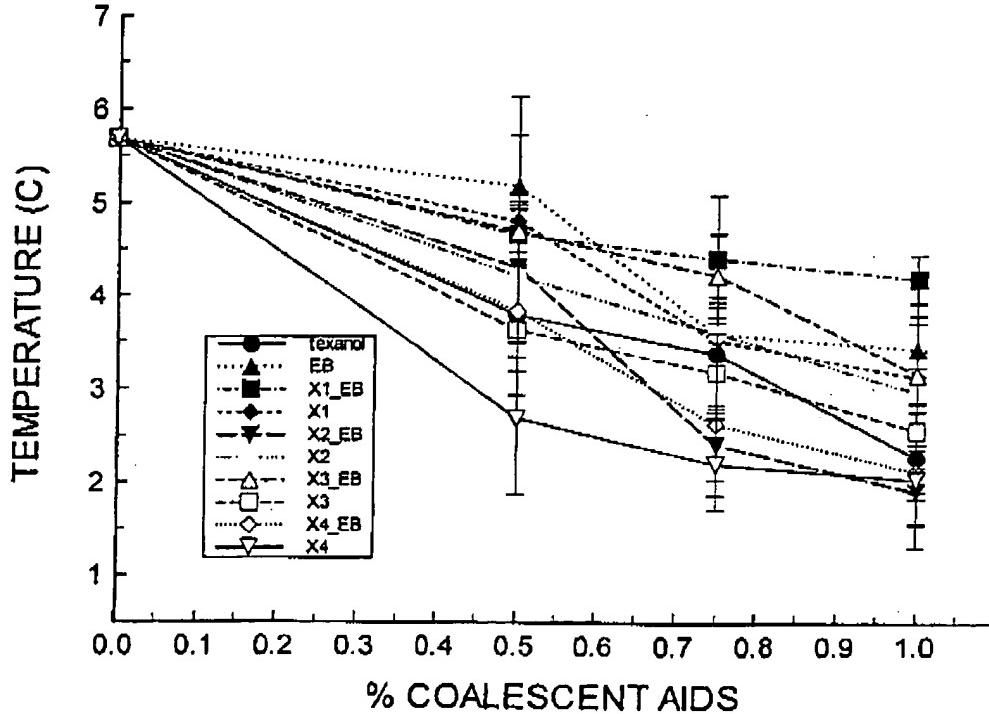
On page 7, line 3, replace "polyunsaturated" with --
polyunsaturated --.

On page 8, last line, replace "eleostearic" with --
eleostearic --.

On page 11, line 7, replace "comounds" with -- compounds
--, and on line 19, replace "additivies" with -- additives --.

On page 18, lines 6-13, please replace

» MFFT (C) PLOT FOR FLEXBOND 325 AS A FUNCTION OF % COALESCENT AIDS



X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
X_EB= derivatives and EB mixture 50:50

2 BEST AVAILABLE COPY

UMO 1528 (98UMR016)
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All"

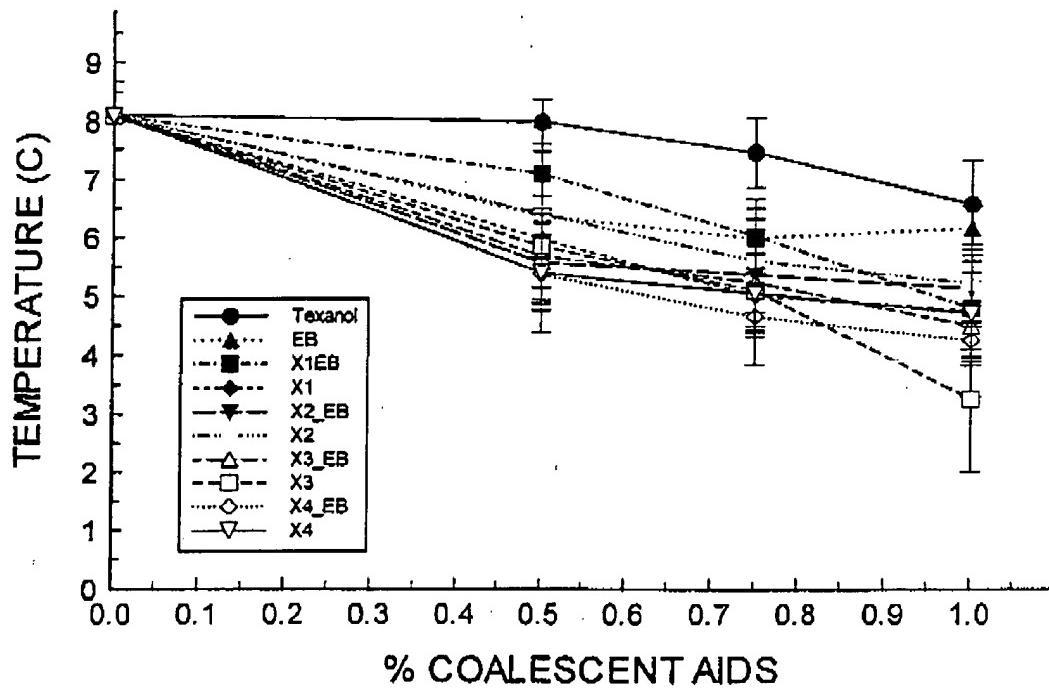
with

C2

--As illustrated by FIG. 1, all--.

On page 19, lines 1-9, please replace

" MFPT (C) PLOT FOR UCAR379 AS A FUNCTION OF % COALESCENT AIDS



- X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
X_EB= derivatives and EB mixture 50:50

All"

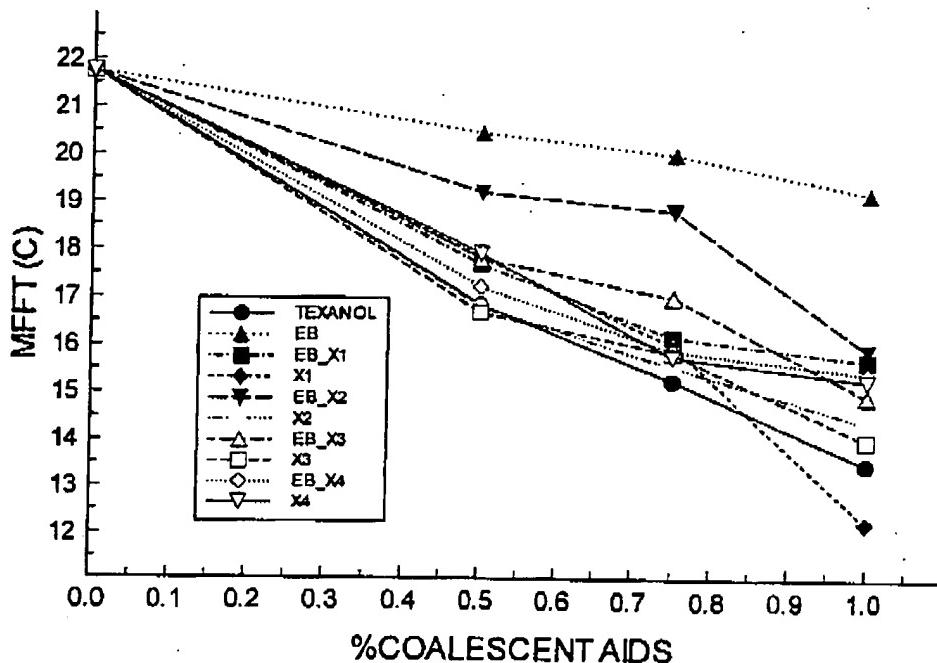
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--As shown in FIG. 2, all--.

On page 21, lines 1-8, please replace

" MFFT(C) PLOT FOR ACRONAL A846 AS A FUNCTION OF COALESCENT AIDS



X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
X_EB=derivatives and EB mixture 50:50

All"

C4 with

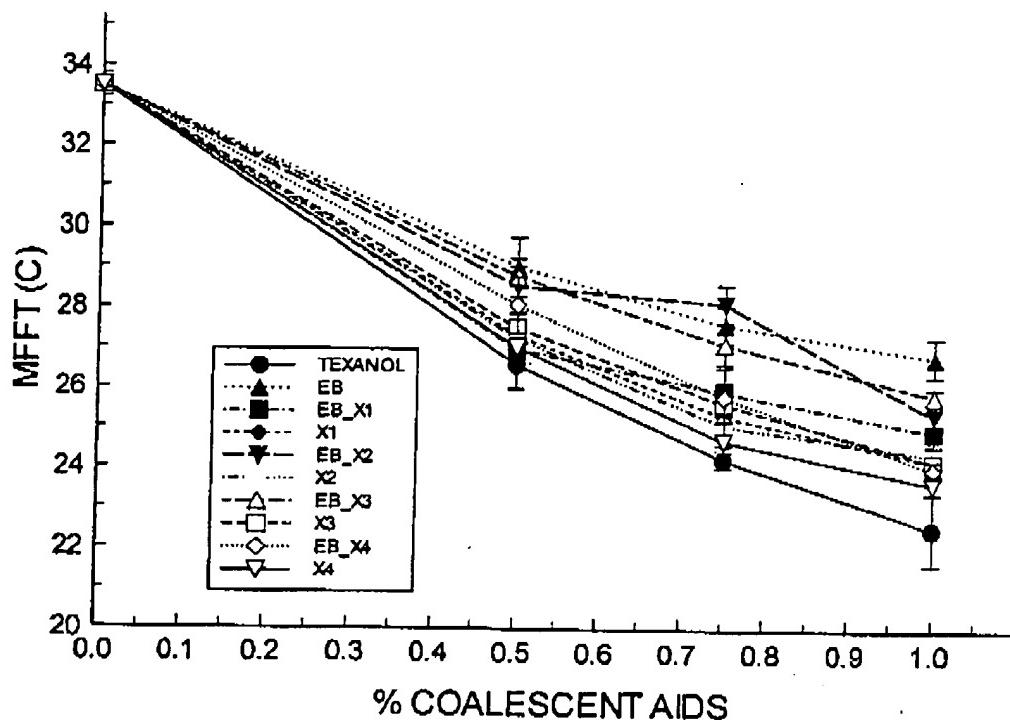
--As illustrated by FIG. 3, all--.

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On page 23, lines 1-9, please replace

" MFFT (C) PLOT FOR UCAR 430 AS A FUNCTION OF COALESCENT AIDS



X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
X_EB=derivatives and EB mixture 50:50

All"

with

C5 As shown in FIG. 4, all

UMO 1528 (98UMR016)
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On page 24, line 6, page 25, line 19, page 27, line 20,
page 29, last line, page 38, last line, replace "Table" with
-- Tables --.

On page 24, lines 7 and 19, page 25, lines 1 and 14, page
28, lines 1 and 14, page 29, lines 1 and 14, page 30, lines 1
and 14, page 38, lines 1 and 14, and page 64, line 21, replace
"TEXANOL" with -- TEXANOL® --.

On page 27, line 14, page 31, line 14, replace "EG-DERI
(X1)" with -- EG-DERIV (X1) --.

On page 32, lines 4, 9, 13 and 18, page 33, lines 27-30,
page 34, line 8, 11, 15, 18, page 35, lines 3, 5, 8, 10, 19,
23, 27 and 31, page 41, lines 5 and 13, page 42, lines 3, 6,
15 and 18, and page 43, lines 3, 6 , 16 and 19, replace
"texanol" with -- TEXANOL® --.

On page 32, line 2, after "shown in" insert -- the --.

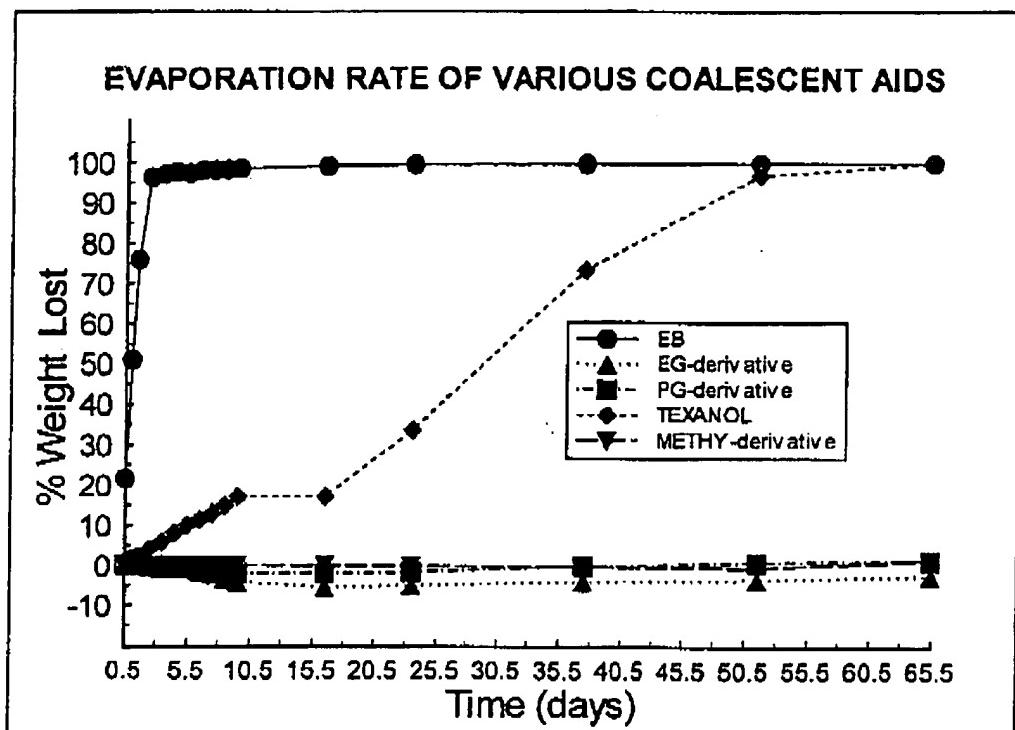
On page 37, last line, insert -- The formulations with
ethylene glycol soybean oil esters are given in the Table
below. --.

On page 38, last line, after "esters" insert -- or
TEXANOL® --.

On page 44, lines 6-9, please replace:

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"below.



with

--in FIG. 5.--.

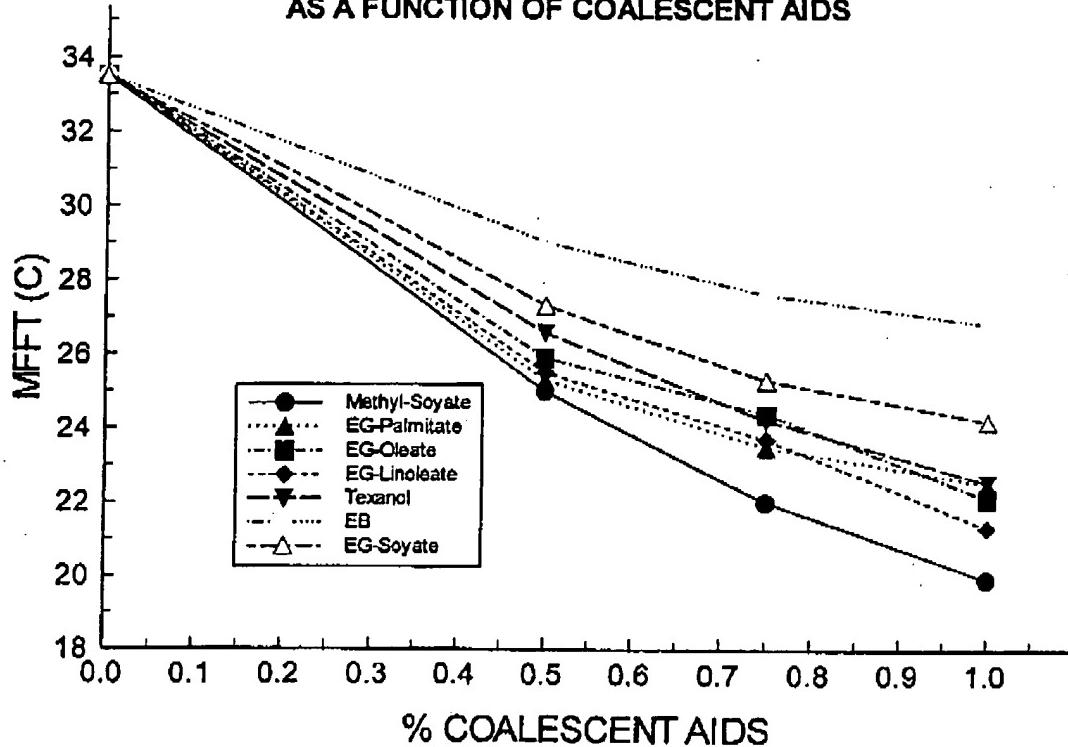
C7
On page 45, line 9 - page 46, line 9, please replace:

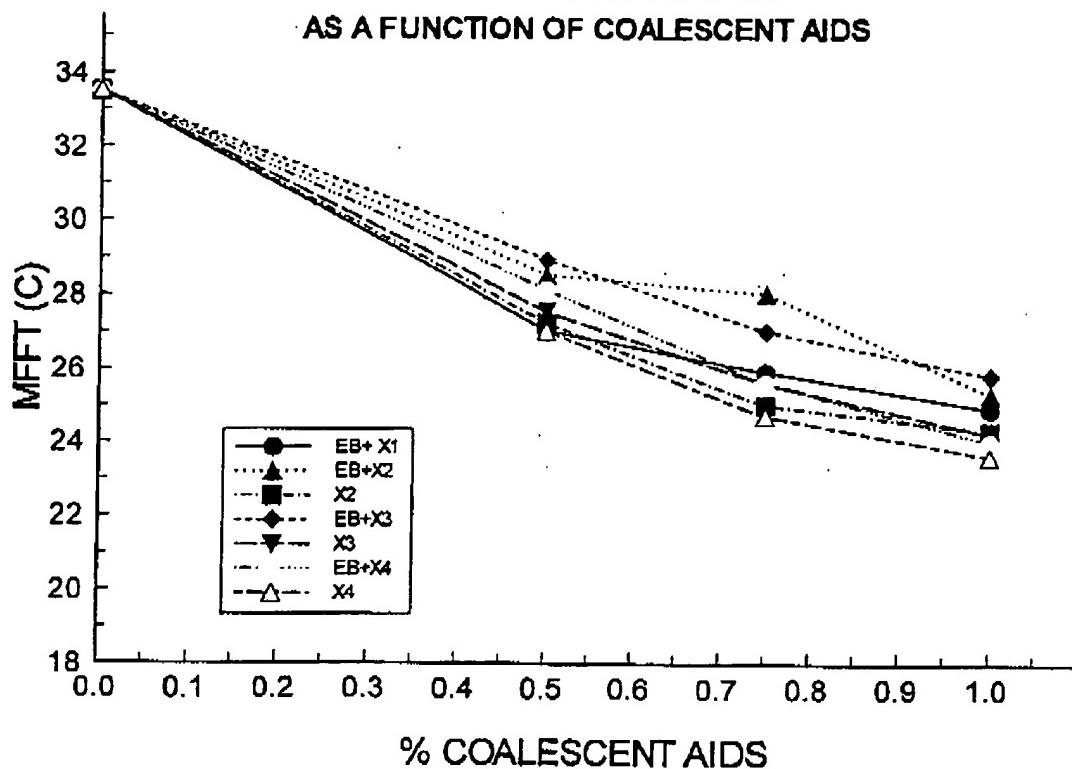
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"as follows.

UCAR 430

**MFFT PLOT FOR UCAR 430
AS A FUNCTION OF COALESCENT AIDS**



UMO 1528 (98UMR016)
PATENTMFFT PLOT FOR UCAR 430
AS A FUNCTION OF COALESCENT AIDS

X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
EB+X= derivatives and EB mixture 50:50

From the MFFT results of high Tg resin (UCAR 430, PS/PMMA) formulation"

with

--in FIGS. 6-9.

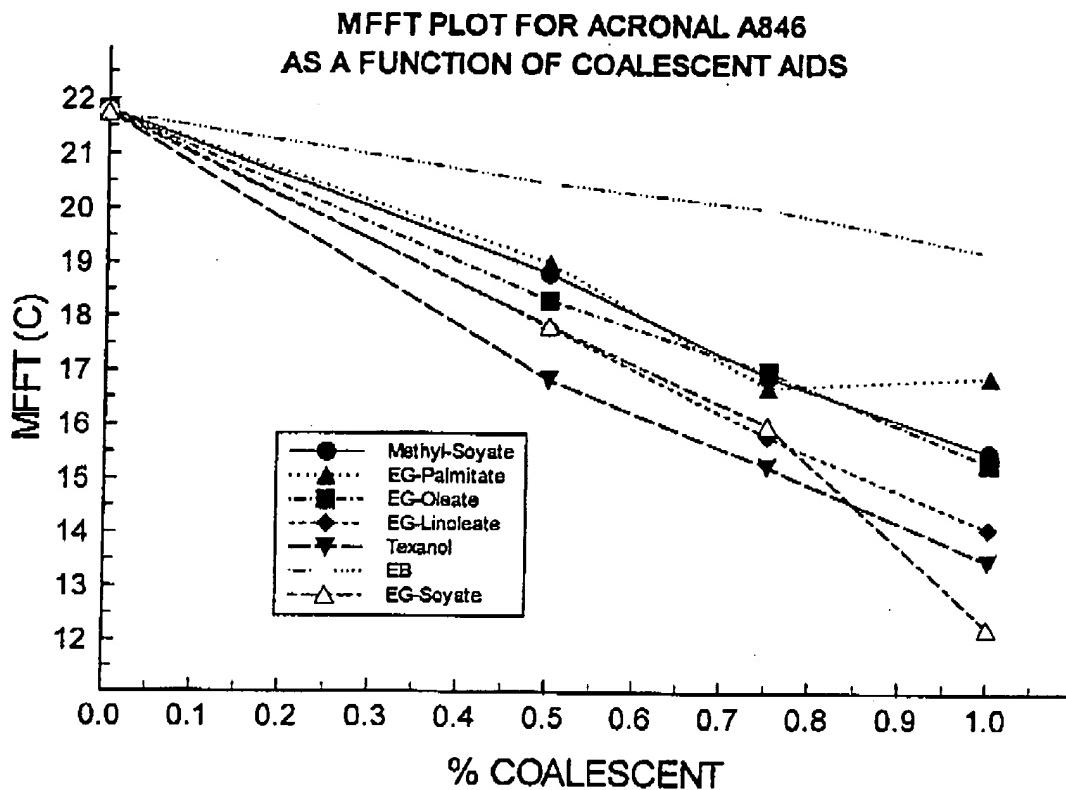
UCAR 430

The results from the MFFT measurements of high Tg resin (UCAR 430, PS/PMMA) formulation are shown in FIGS. 6 and 7. As FIGS. 6 and 7 illustrate--.

UMO 1528 (98UMR016)
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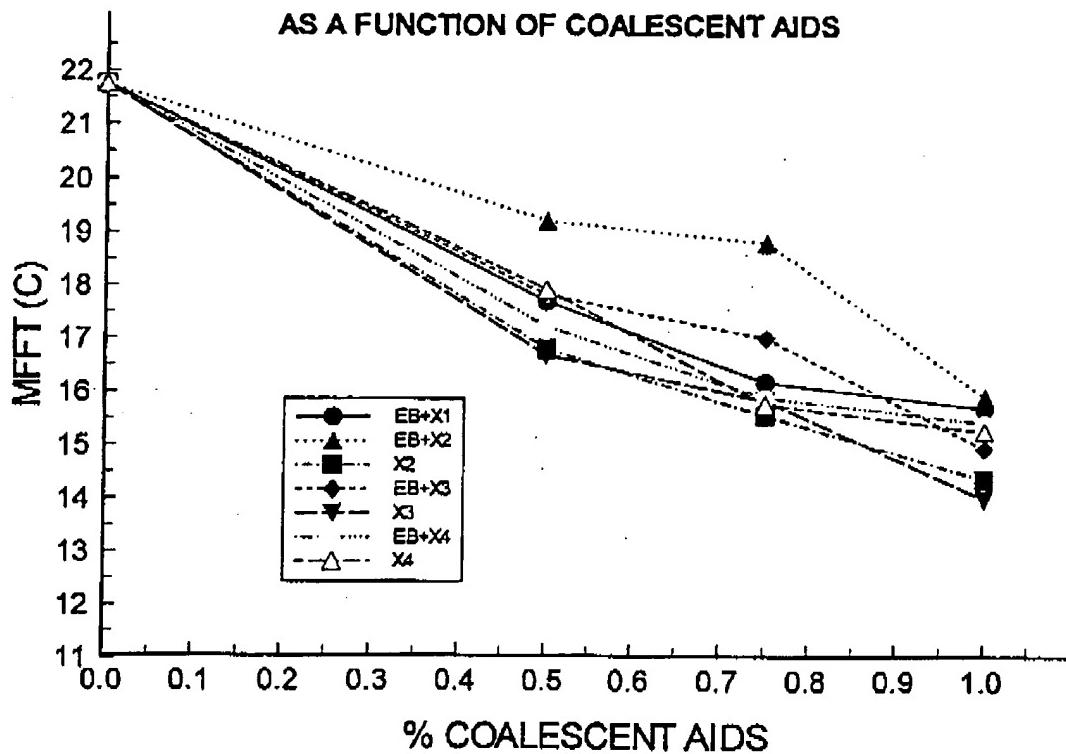
On page 46, line 14, replace "All" with ~~/~~-As shown in
FIG. 7, all-~~/~~.

On page 47, line 5 - page 48, line 9, please replace



UMO 1528 (98UMR016)
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MFFT PLOT FOR ACRONAL A846
AS A FUNCTION OF COALESCENT AIDS



X1= Ethylene glycol soy oil ester
X2= Propylene glycol soy oil ester
X3= Diethylene glycol soy oil ester
X4= Dipropylene glycol soy oil ester
EB= Ethylene glycol monobutyl ether
EB+X= derivatives and EB mixture 50:50

From the MFFT results of high Tg resin (ACRONAL A846, pure acrylic resin) formulation, it"

with

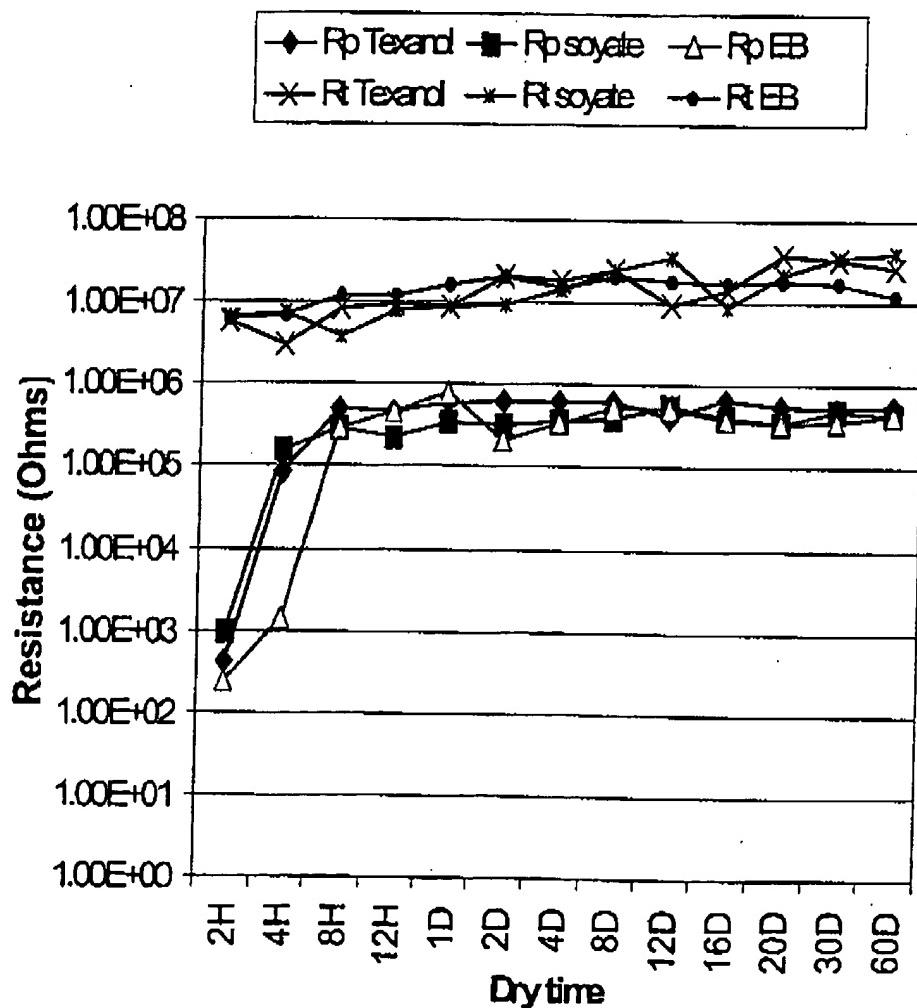
C10
--The MFFT results of high Tg resin (ACRONAL A846, pure acrylic resin) formulation are shown in FIGS. 8 and 9. It--

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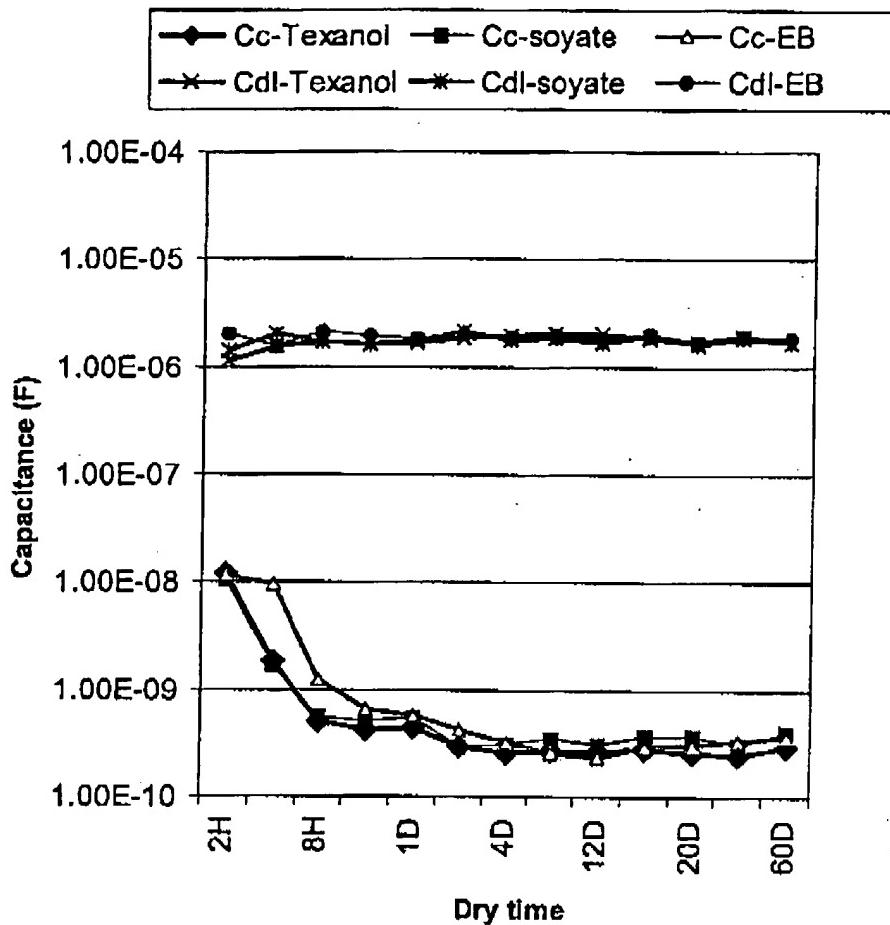
On page 49, lines 14-15, please replace "The plot showed
an increasing in coating resistance" with -As FIG. 10
CN illustrates, the coating resistance increased-

On page 49, line 15 and page 51, line 3, replace "days"
with -- hours --.

On page 50, line 1 - page 51, line 2, please replace:



UMO 1528 (98UMR016)
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The coating capacitance plot"

with

C12

--The coating capacitance plot (shown in FIG. 11) --.

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On page 51, lines 11-12, please replace "The results of coating capacitance and resistance as a function of dry time of formulation with soybean oil coalescent aid" with /As FIGs. 10 and 11 illustrate, the AC Impedance measurements-/.

C13
On page 52, line 8 - page 63, line 1, please replace:

* IR-SPECTRA

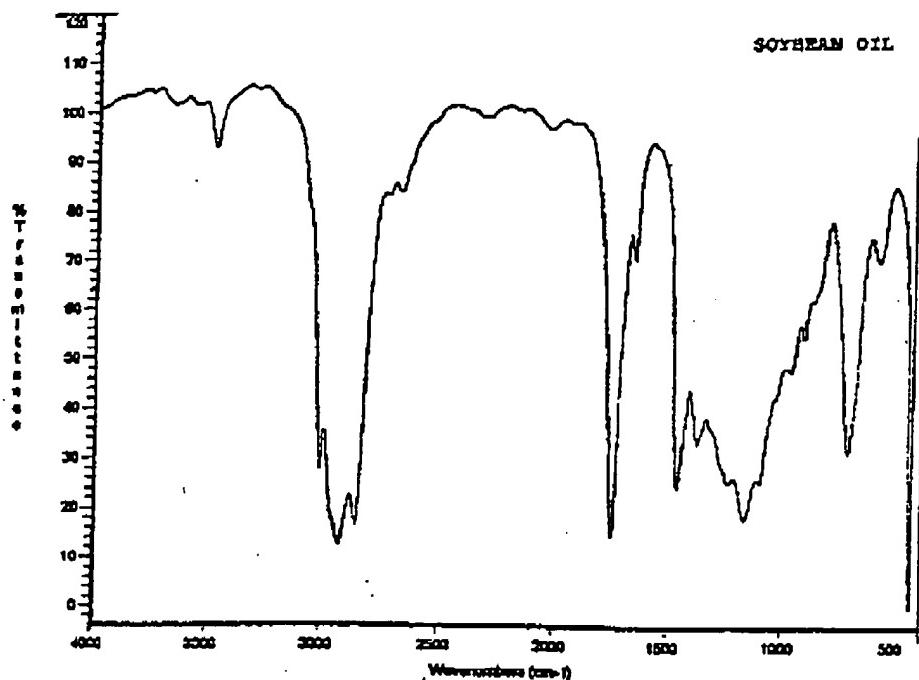


Figure 2.1. IR-spectra of soybean oil

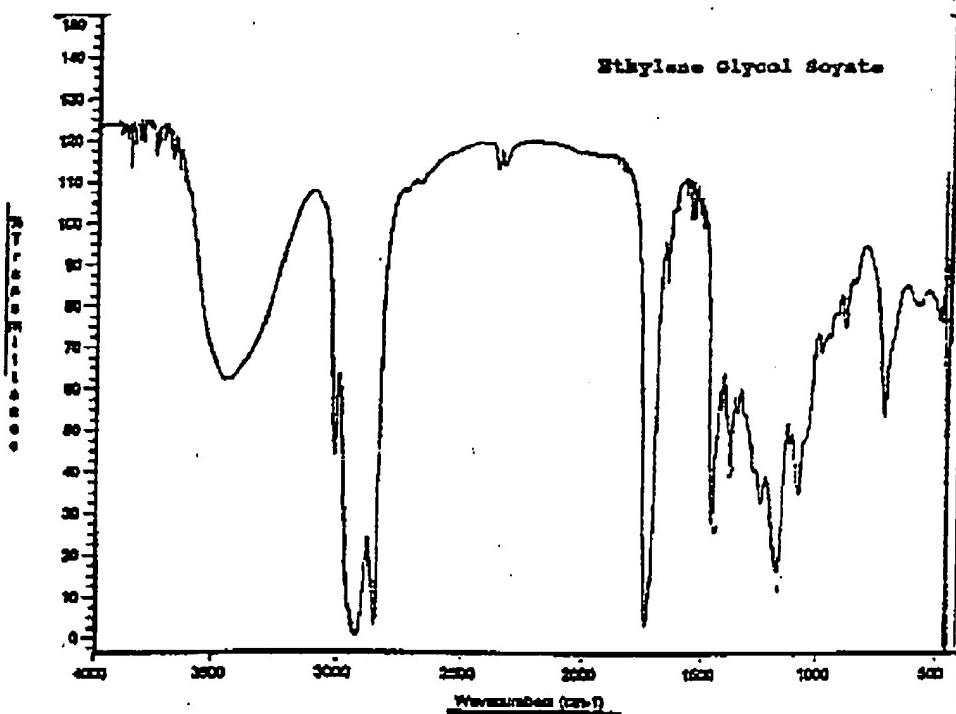


Figure 2.2. IR-spectra of ethylene glycol soybean oil ester derivative

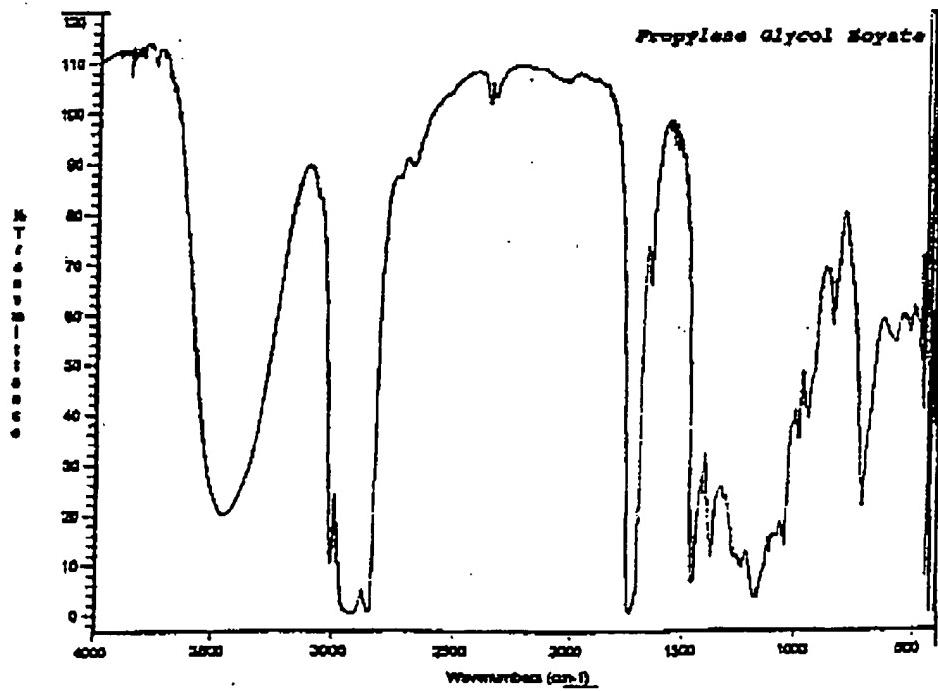


Figure 2.3. IR-spectra of propylene glycol soybean oil ester derivative

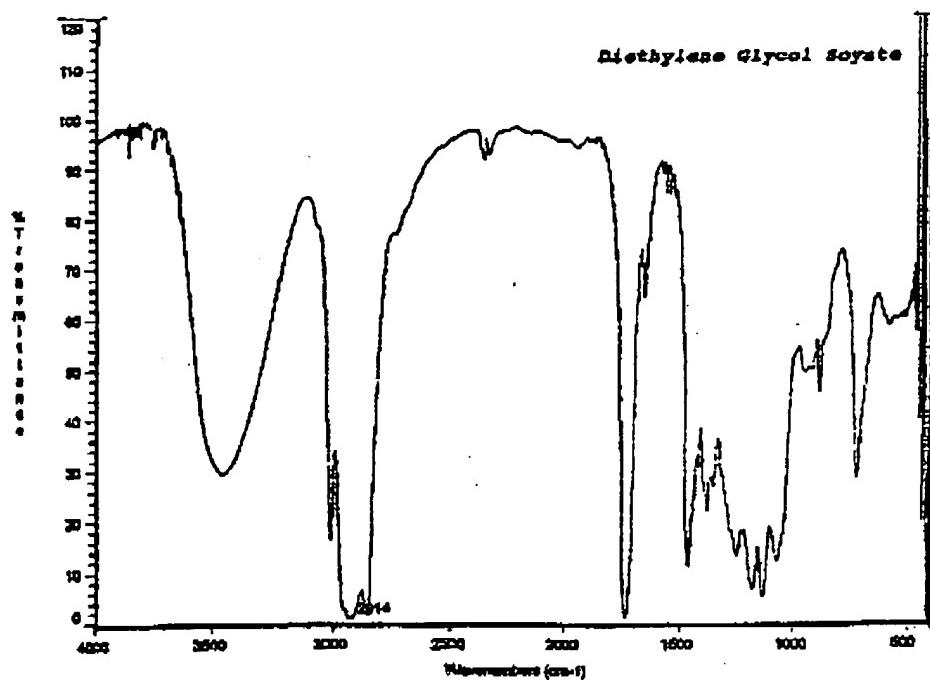
UM 6528(98UMR16)
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Figure 2.4. IR-spectra of diethylene glycol soybean oil ester derivative

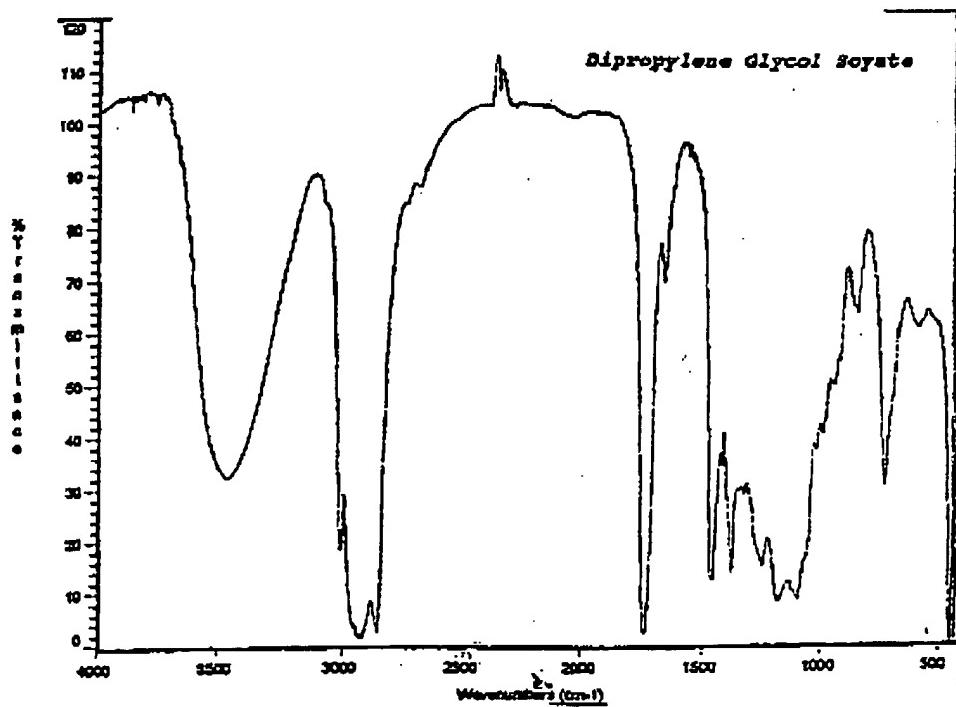


Figure 2.5. IR-spectra of dipropylene glycol soybean oil ester derivative

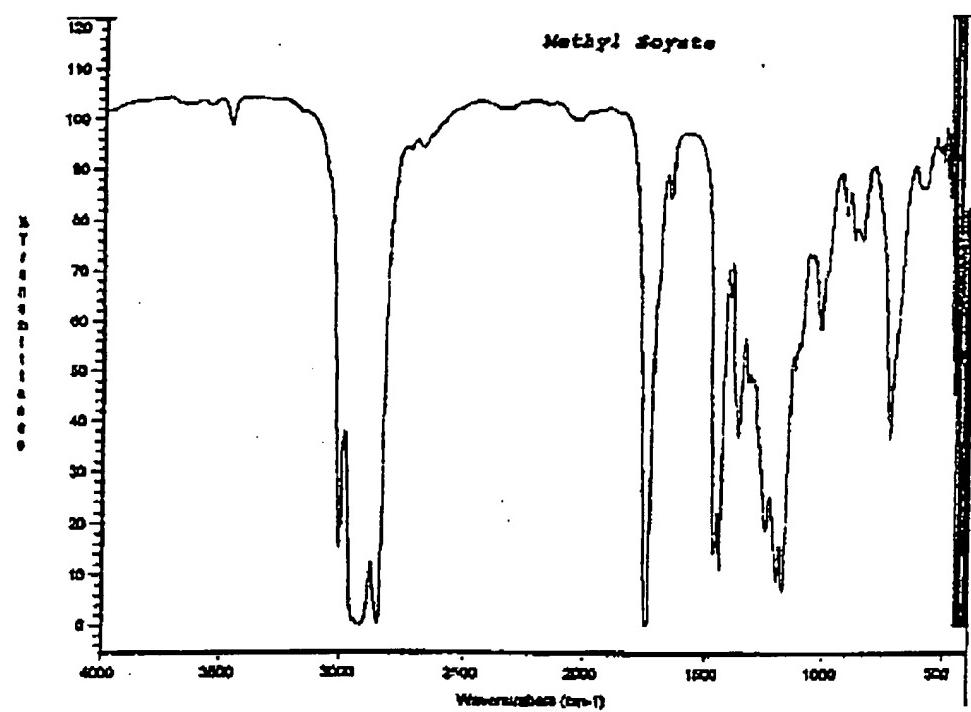
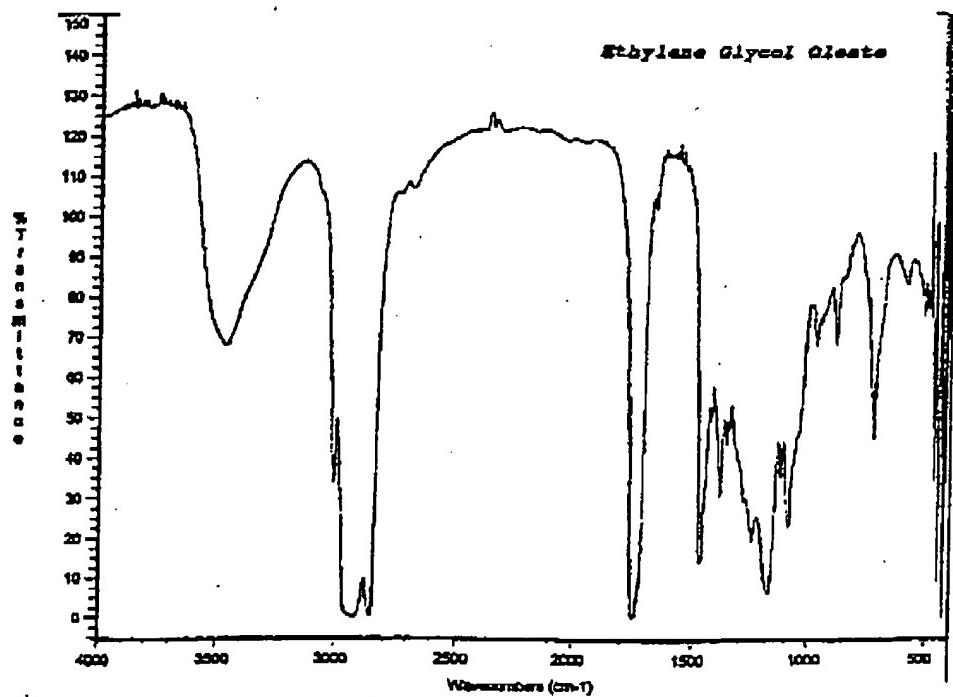
UM 528(98UMR16)
PATENT

Figure 2.6. IR-spectra of methyl soybean oil ester derivative

Figure 2.7. IR-spectra of ethylene glycol oleate ester derivative
17

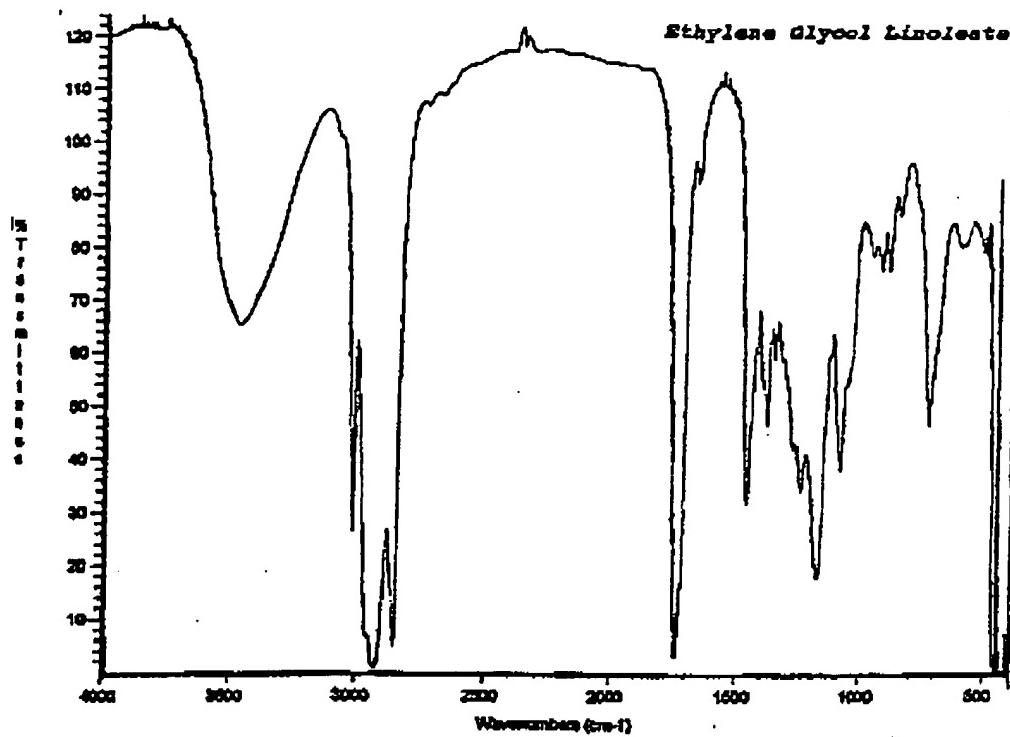
U 1528(98UMR16)
PATENT

Figure 2.8. IR-spectra of ethylene glycol linoleate ester derivative

H1-NMR DATA

SOYBEAN OIL

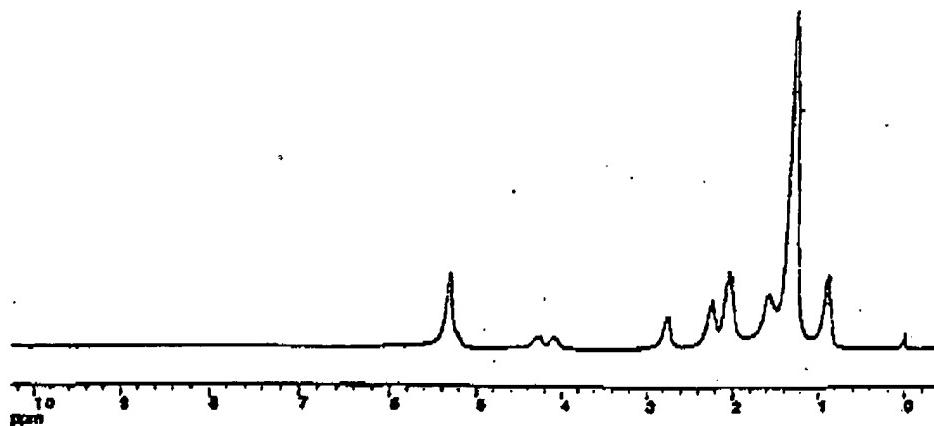


Figure 3.1. H1-NMR spectra of soybean oil

Ethylene Glycol Soyate

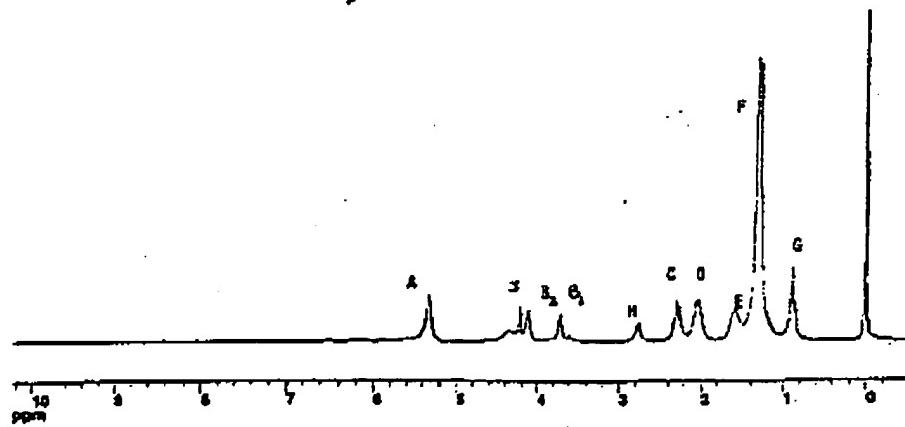
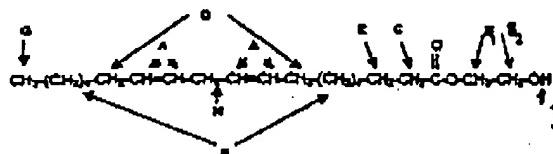


Figure 3.2 H1-NMR spectra of ethylene glycol soybean oil ester derivative

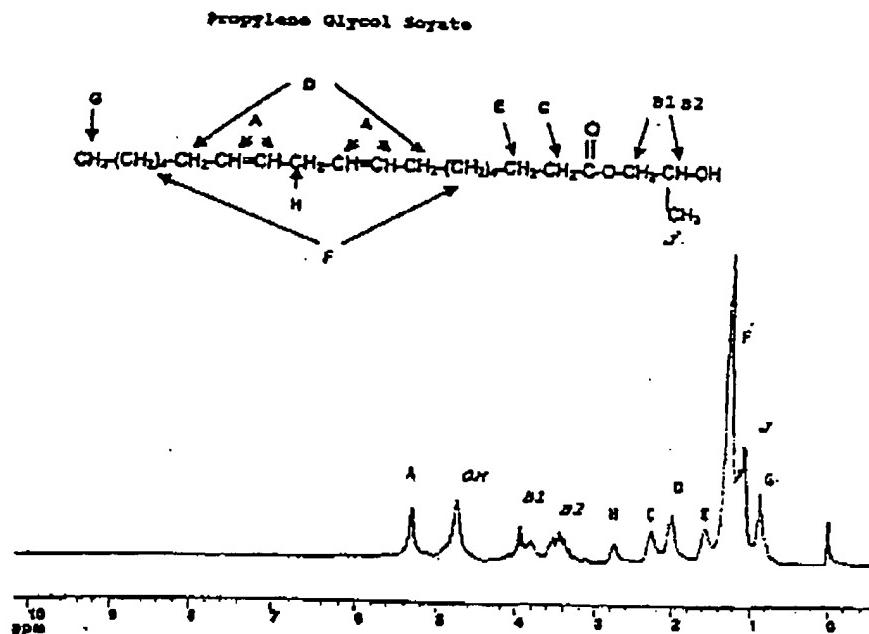
UN 1528(98UMR16)
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Figure 3.3 H1-NMR spectra of propylene glycol soybean oil ester derivative

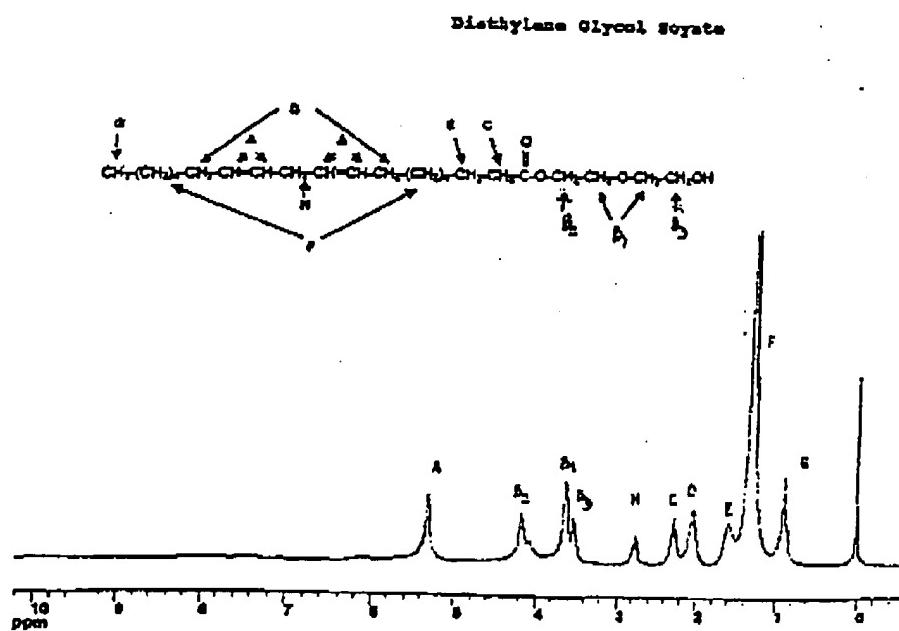
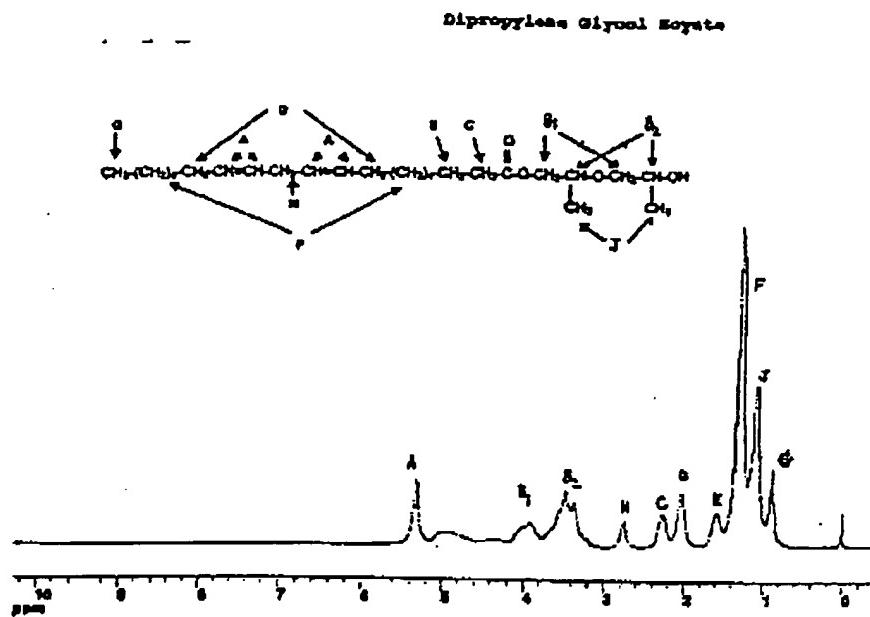
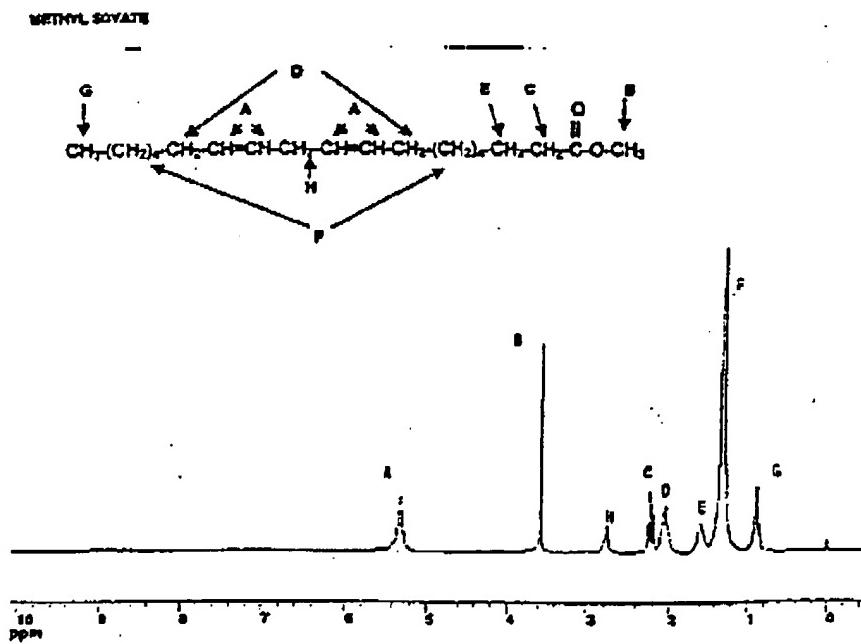
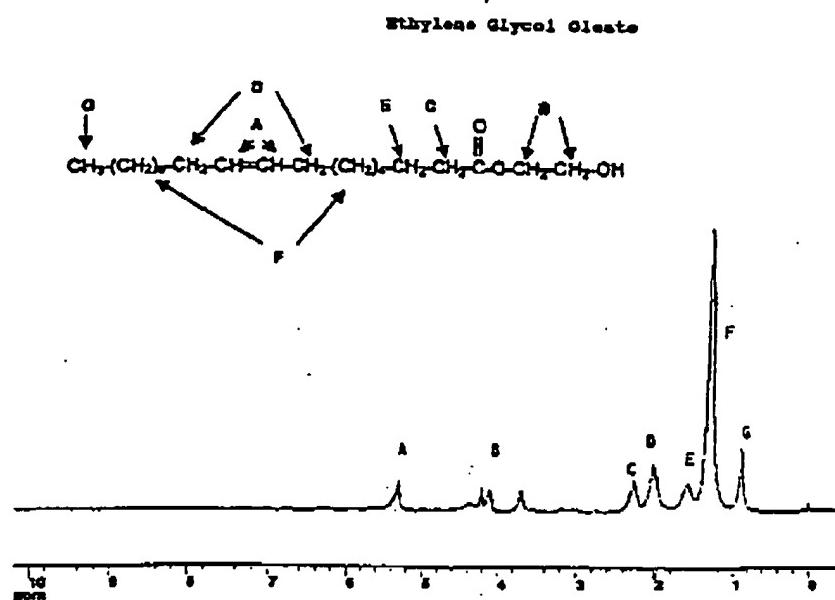
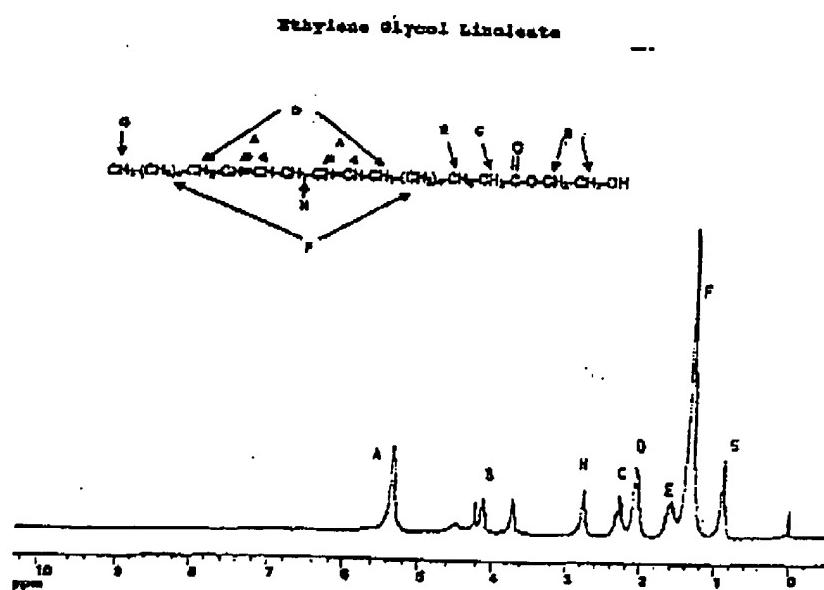


Figure 3.4 H1-NMR spectra of diethylene glycol soybean oil ester derivative

U 61528(98UMR16)
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21

UM 528(98UMR16)
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C13-NMR DATA

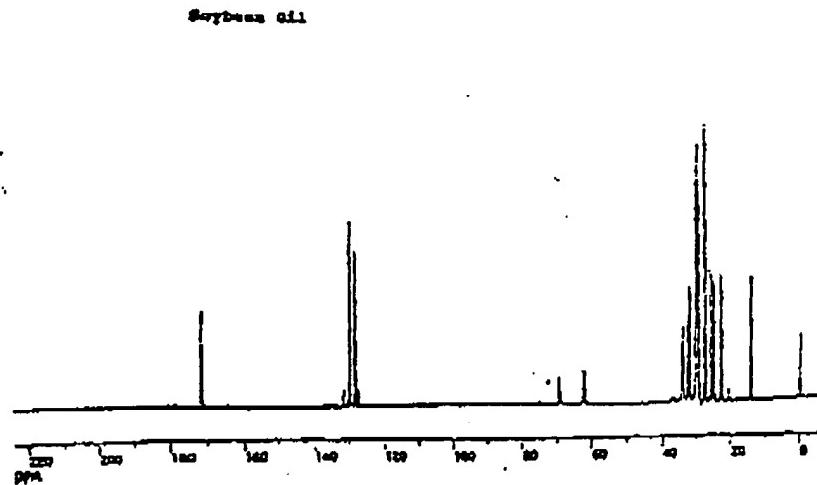


Figure 3.9. C13-NMR spectra of soybean oil

Ethylene Glycol Soyate

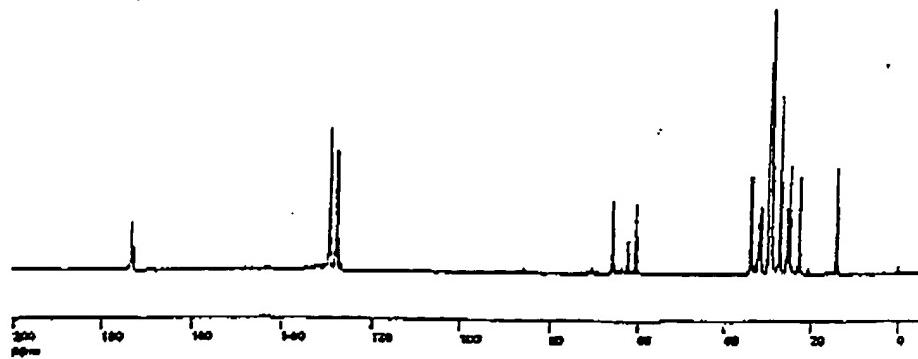


Figure 3.10. C13-NMR spectra of ethylene glycol soybean oil ester derivative

PROPYLENE GLYCOL SOYATE

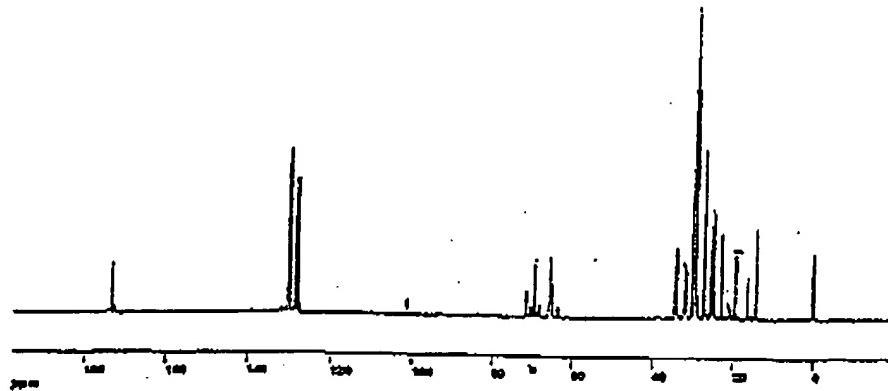


Figure 3.11. C13-NMR spectra of propylene glycol soybean oil ester derivative

DIETHYLENE GLYCOL SOYATE

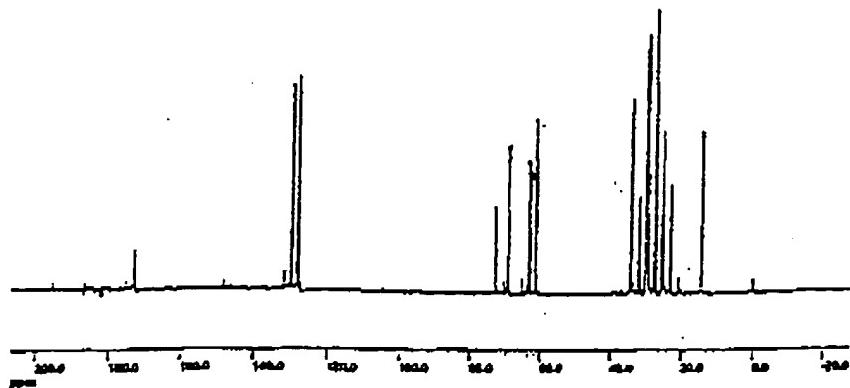


Figure 3.12. C13-NMR spectra of diethylene glycol soybean oil ester derivative

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DIPROPYLENE GLYCOL SOYATE

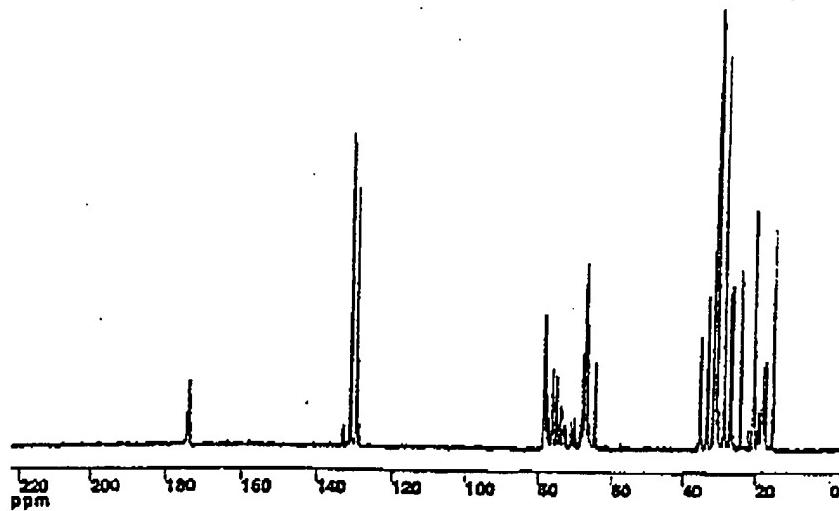


Figure 3.13. C13-NMR spectra of dipropylene glycol soybean oil ester derivative "

with

--IR SPECTRA

Infrared spectra of soybean oil and soybean oil ester derivatives are shown in FIGS. 12-19. FIG. 12 shows the IR spectrum of soybean oil. FIGS. 13-17 show the IR spectra of the soybean oil ester derivatives of ethylene glycol (FIG. 13), propylene glycol (FIG. 14), diethylene glycol (FIG. 15), dipropylene glycol (FIG. 16) and the methyl soybean oil ester derivative (FIG. 17). FIG. 18 shows the IR spectrum of the

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C14
cont.
ethylene glycol oleate ester derivative and FIG. 19 shows the IR spectrum of the ethylene glycol linoleate ester derivative.

H1-NMR DATA

H1-NMR spectra were obtained for soybean oil and soybean oil ester derivatives. FIG. 20 shows the H1-NMR spectrum of soybean oil. FIGs. 21-25 show the H1-NMR spectra of the soybean oil ester derivatives of ethylene glycol (FIG. 21), propylene glycol (FIG. 22), diethylene glycol (FIG. 23), dipropylene glycol (FIG. 24) and the methyl soybean oil ester derivative (FIG. 25). The H1-NMR spectrum of the ethylene glycol oleate ester derivative is shown in FIG. 26, and FIG. 27 shows the H1-NMR spectrum of the ethylene glycol linoleate ester derivative.

C13-NMR DATA

C13-NMR spectra were obtained for soybean oil and soybean oil ester derivatives. FIG. 28 shows the C13-NMR spectrum of soybean oil. FIGs. 29-32 show the C13-NMR spectra of the soybean oil ester derivatives of ethylene glycol (FIG. 29), propylene glycol (FIG. 30), diethylene glycol (FIG. 31), and dipropylene glycol (FIG. 32). --.

On page 64, lines 24 and 25, and page 65, lines 3 and 5, replace "Texanol" with -- TEXANOL® --.

IN THE CLAIMS:

In claim 10, line 2, replace "ethylene" with -- diethylene--.